

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior listings of claims in the present application.

What Is Claimed Is:

1. (canceled)

2. (previously presented) An optical disk medium according to claim 4, in which said spiral recording track is divided into a plurality of zones in a radial direction of said medium, wherein:

each of said tilt detection areas is located within an area which is formed in the vicinity of a zone boundary between said zones and which is not used in recording data.

3. (previously presented) An optical disk medium according to claim 4, in which said spiral recording track having a predetermined linear recording density is divided into a plurality of segments having a predetermined segment length and added with address information, wherein:

each of said detection areas is located on the recording track in the vicinity of a radial position at which the length of the recording track in a single round of said medium corresponds to an integral multiple of said segment length.

4. (previously presented) An optical disk medium having a spiral recording track, wherein:

said optical disk medium comprises a plurality of tilt detection areas formed at a plurality of radial positions on said medium, each of said tilt detection areas having a plurality of special marks (SM) for detecting a plurality of tilts of said medium in a single round of said medium;

a plurality of grooves are periodically formed in a radial direction of said medium, said optical disk medium having, as said recording track, said grooves or a plurality of lands between said grooves or both of said grooves and said lands; and

each of said special marks being formed by first and second coupling portions arranged in close proximity to each other in a tracking direction along which said recording track extends, said first coupling portion being formed as a coupling groove having a depth substantially equal to that of said grooves and a length in said tracking direction which is longer than twice a groove pitch of said grooves, said first coupling portion coupling a particular one of the grooves and one of two grooves adjacent to said particular groove on opposite sides thereof, said second coupling portion being formed as a coupling groove having a depth substantially equal to that of said grooves and a length in said tracking direction which is longer than twice said groove pitch, said second coupling portion coupling said particular groove and the other of said two grooves.

5. (previously presented) An optical disk medium having a spiral recording track said optical disk medium comprising :

a plurality of tilt detection areas formed at a plurality of radial positions on said medium, each of said tilt detection areas having a plurality of special marks (SM) for detecting a plurality of tilts of said medium in a single round of said medium

a plurality of grooves are periodically formed in a radial direction of said medium, said optical disk medium having, as said recording track, both of said grooves and lands between said grooves; and

each of said special marks being formed by first and second coupling portions arranged in close proximity to each other in a tracking direction along which the recording track extends,

said first coupling portion being formed as a coupling land having a height substantially equal to that of said lands and a length in said tracking direction which is longer than twice a groove pitch of said grooves, said first coupling portion coupling a particular one of said lands and one of two lands adjacent to said particular land on opposite sides thereof, said second coupling portion being formed as a coupling land having a height substantially equal to that of said lands and a length in said tracking direction which is longer than twice said groove pitch, said second coupling portion coupling said particular land and the other of said two lands.

6. (currently amended) An optical disk recording/reproducing apparatus for recording or reproducing data on an optical disk medium, said optical disk medium comprising: a plurality of grooves as a recording track; and a plurality of special marks (SM), each of said special marks being formed by first and second coupling portions arranged in close proximity to each other in a tracking direction along which the recording track extends, said first coupling portion coupling a particular one of said grooves and one of two grooves adjacent to said particular groove on opposite sides thereof, said second coupling portion coupling said particular groove and the other of said two grooves, the optical disk recording/reproducing apparatus comprising:

a detector adapted to detect reflected light amount at each of said first and said second coupling portions when an optical spot follows said recording track; and

a tilt controller adapted to calculate a medium tilt of said medium from the change in the reflected light amount at each of said first and said second coupling portions.

7. (currently amended) An optical disk recording/reproducing apparatus according to claim 6, said plurality of special marks being formed in a single round track of said medium, said apparatus further comprising:

a ~~tilt controller~~driver adapted to perform ~~tilt control~~drive by the use of an average of the medium tilts detected and calculated at said plurality of special marks formed in the single round track of said medium.

8. (canceled)

9. (currently amended) An optical disk recording/reproducing apparatus for recording or reproducing data on an optical disk medium, said optical disk medium comprising: a plurality of lands as a recording track; and a plurality of special marks (SM), each of said special marks being formed by first and second coupling portions arranged in close proximity to each other in a tracking direction along which said recording track extends, said first coupling portion coupling a particular one of said lands and one of two lands adjacent to said particular land on opposite sides thereof, said second coupling portion coupling said particular land and the other of said two lands, the optical disk recording/reproducing apparatus comprising:

a detector adapted to detect reflected light amount at each of said first and said second coupling portions when an optical spot follows said recording track; and

a tilt controller adapted to calculate a medium tilt of said medium from the change in the reflected light amount at each of said first and said second coupling portions.

10. (currently amended) An optical disk recording/reproducing apparatus according to claim 9,

said plurality of special marks being formed in a single round track of said medium, said apparatus further comprising:

a tilt ~~controller~~driver adapted to perform tilt ~~control~~drive by the use of an average of the medium tilts detected and calculated at said plurality of special marks formed in the single round track of said medium.

11. (canceled)

12. (previously presented) An optical disk medium according to claim 5, in which said spiral recording track is divided into a plurality of zones in a radial direction of said medium, wherein:

each of said tilt detection areas is located within an area which is formed in the vicinity of a zone boundary between said zones and which is not used in recording data.

13. (previously presented) An optical disk medium according to claim 5, in which said spiral recording track having a predetermined linear recording density is divided into a plurality of segments having a predetermined segment length and added with address information, wherein:

each of said detection areas is located on the recording track in the vicinity of a radial position at which the length of the recording track in a single round of said medium corresponds to an integral multiple of said segment length.